

Remarks

The Examiner rejected claims 1 and 3–22. Claims 1, 3–6, 8–11, 18, and 19 have been amended. Claim 33 has been added. Claims 1, 3–22, and 33 remain in the application.

Independent claim 1 has been amended to define:

- (a) the cylindrical wall of the chamber as forming a first elongated slot that is elongated generally axially along the cylindrical wall and that extends through the cylindrical wall from the interior surface to the exterior surface; and
- (b) the first waveguide as having a waveguide wall that extends in length along a direction of propagation of microwave energy and that forms an elongated opening in the waveguide wall along the length of the waveguide, wherein the first waveguide connects to the exterior surface of the cylindrical chamber with the elongated opening in the waveguide wall in communication with the first elongated slot through which the first waveguide couples microwave energy into the cylindrical chamber.

The amendment is supported by the specification on page 4, lines 4–19 and by FIGS. 3 and 5. A limitation believed to be unnecessary to the patentability of claim 1 has been deleted and recited in new dependent claim 33. (It was previously recited in original claim 2, canceled in applicants' previous response.) Dependent claims 3–6 have been amended to change their dependency to claim 33. Dependent claims 8–11, 18, and 19 have been amended to comport their language with the language of their amended base claim 1. None of the amendments adds new matter.

The Examiner rejected claims 1, 4–7, 11, and 22 under 35 U.S.C. § 102(b) as being anticipated by US 3,673,370 (Johnson); claims 1, 7–9, 11, 18, and 22 under 35 U.S.C. § 102(b) as being anticipated by US 4,749,915 (Lynch et al.); claim 3 under 35 U.S.C. § 103(a) as being unpatentable over Johnson; claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Lynch et al.; claims 12, 13, 16, and 17 under 35 U.S.C. § 103(a) as being unpatentable over Lynch et al. in view of US 6,008,483 (McKee et al. '483); claims 14 and 15 under 35 U.S.C. § 103(a) as being unpatentable over Lynch et al. in view of McKee et al. '483 and further in view of US 5,990,466 (McKee et al. '466); and claims 19–21 under 35 U.S.C. § 103(a) as being unpatentable over Lynch et al. in view of US 3,775,709 (Firmain et al.). The rejections are respectfully traversed.

MPEP § 2131 provides: “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Neither Johnson nor Lynch et al. discloses, among other things, items (a) and (b) listed in the second paragraph of this Remarks section. In Johnson, the slot (coupling iris 57) in the cylindrical wall is not elongated generally axially along the cylindrical wall; rather, it appears to be circular or even elongated circumferentially as viewed in FIGS. 5 and 8. Furthermore, both Johnson and Lynch et al. launch microwave energy into microwave cavities through slots or opening at the ends of waveguides so that the direction of microwave propagation is directly through the openings and into the chambers. Neither Johnson nor Lynch et al. couples microwave energy from a waveguide into a cylindrical chamber through elongated openings along the length of a waveguide side wall in a direction transverse to the

waveguide's main direction of propagation of microwave energy along the length of the waveguide wall. Therefore, the § 102(b) rejections are unsupported by the art and should be withdrawn.

Because the other cited references do not overcome the deficiencies of Johnson and Lynch et al. with respect to claim 1, the § 103(a) rejections of the dependent claims, all of which are based on claim 1, are also unsupported by the art and should be withdrawn.

Applicants respectfully request allowance of claims 1, 3-22, and 33 in view of these amendments and remarks. This response is being submitted electronically. If any fee is due for entering this amendment, please charge it to Deposit Account No. 12-0090. If the Examiner thinks a telephone conference would expedite the prosecution of this application, he is cordially invited to call applicants' attorney.

Respectfully submitted,
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